ADDENDUM NO. 1

TO: PLANS AND SPECIFICATIONS FOR STATE OF MISSOURI

Install Nature Park Missouri School for the Blind St. Louis, Missouri PROJECT NO. E1703-01

Bid Opening Date: 1:30 PM, Tuesday, December 3, 2019 (Not Changed)

Bidders are hereby informed that the Construction Plans and/or Specifications are modified as follows:

SPECIFICATION CHANGES:

1. SECTION 055213 - PIPE AND TUBE RAILINGS

- a. REMOVE and REPLACE Paragraph 2.5-J as follows:
 - J. Woven-Wire Mesh Infill Panels: Fabricate infill panels from woven-wire mesh crimped into 1-by-1/2-by-1/8-inch metal channel frames. Wire mesh shall be stainless steel.
 - 1. Orient wire mesh as indicated on Drawings.
 - 2. Connection shall be stainless steel ¾" deep U-channel.
 - 3. Concealed fastening shall be as needed to meet the performance requirements listed in Specification Section 055213, Paragraph 2.2

2. SECTION 116800 - PLAY FIELD EQUIPMENT AND STRUCTURES

- a. REMOVE and REPLACE Paragraph 2.1 MANUFACTURERS as follows:
 - A. Bidders are hereby informed that the play field equipment and structures were written as performance specs.

1. SWING SET

- a. Basis of Design: Subject to compliance with requirements, provide the following product by Landscape Structures or an APPROVED comparable product by one of the following:
 - i. Gametime
 - ii. Miracle Recreation

2. LOG CRAWL TUNNEL

- Basis of Design: Subject to compliance with requirements, provide the following product by Landscape Structures or an APPROVED comparable product by one of the following:
 - i. Gametime
 - ii. Pro Playgrounds

3. ROTATING CLIMBER OR CLIMER MERRY-GO-ROUND

- a. Basis of Design: Subject to compliance with requirements, provide the following product by B.C.I. Burke or an APPROVED comparable product by one of the following:
 - i. Gametime
 - ii. Miracle Recreation

4. COMPOSITE PLAY STRUCTURE BACKYARD TREE HOUSE UNIT

- a. Basis of Design: Subject to compliance with requirements, provide the following product by Themed Concepts or an APPROVED comparable product by one of the following:
 - i. Gametime
 - ii. Landscape Structures

5. **LEANING TREE RINGS**

- a. Basis of Design: Subject to compliance with requirements, provide the following product by Themed Concepts or an APPROVED comparable product by one of the following:
 - i. Gametime
 - ii. Landscape Structures

6. MULE AND LION CLIMBING SCULPTURES

- a. Basis of Design: Subject to compliance with requirements, provide the following product by Themed Concepts or an APPROVED comparable product by one of the following:
 - i. Experiential Systems, Inc.
 - ii. Gametime

3. <u>SECTION 116801 – PLAY FIELD EQUIPMENT AND STRUCTURES ROPES COURSES AND CLIMBING WALL</u>

- a. ADD Paragraph 2.1-B as follows:
 - B. Bidders are hereby informed that the play field equipment and structures ropes courses and climbing wall were written as performance specs.

1. ROPES COURSE

- a. Basis of Design: Subject to compliance with requirements, provide the following product by Ropes Courses, Inc. or an APPROVED comparable product by one of the following:
 - Experiential Systems, Inc.
 - ii. Skywalker Adventure Builders

2. CLIMBING WALL

- a. Basis of Design: Subject to compliance with requirements, provide the following product by Ropes Courses, Inc. or an APPROVED comparable product by one of the following:
 - i. Everlast Climbing
 - ii. Park Planet

4. SECTION 117000 - GREENHOUSE

- a. REMOVE Paragraph 2.6 INSULATED PANELS
- b. REMOVE and REPLACE Paragraph 2.7 RIDGE & SIDE VENT as follows:
 - A. Vent construction to be manufacturer's standard type, continuous hinge and arranged to open outward.
 - B. Provide a minimum of 36 vent openings. panes in total, comprising of (7) 3-pane roof vents, and (5) 3-pane vertical face vents,3-in the rear elevation and 2-in the front elevation manually operated. The vents are approximately 2'2" deep from top to bottom and are 3 panes wide, measuring approximately 3' 8".
 - 1. Provide additional roof and sidewall vents per manufacturer recommendations due to climate specific requirements.
- c. REMOVE and REPLACE Paragraph 2.8 VENT OPERATORS as follows:
 - A. Roof vents are to be automatically controlled by manufacturer's standard temperature sensitive hydraulic auto vent operators.
 - 1. If power is required, coordinate requirements with electrical contractor. All associated costs to be included in proposal.
 - B. Sidewall vents to be manually controlled by manufacturer's standard hand operated control system.
- d. REMOVE AND REPLACE Paragraph 2.10 GLAZING as follows:
 - A. Roof and sidewall glazing to be manufacturer's standard, greenhouse quality, clear tempered safety glass, minimum 4mm with all edges cushioned by glazing seals bonded to the glass. Each pane to be held within individual framework on all sides no glass to glass, or glass to metal, nor overlapping glass contact.
- e. REMOVE Paragraph 2.14 EVAPORATIVE COOLING SYSTEM
- f. REMOVE Paragraph 2.15 UNIT HEATERS
- g. REMOVE Paragraph 2.16 GREENHOUSE LIGHTING
- h. REMOVE Paragraph 2.17 HORIZONTAL AIR FLOW FANS
- i. REMOVE and REPLACE Paragraph 2.18 LOW PRESSURE IRRIGATION SYSTEM as follows:
 - A. Provide low-pressure drip irrigation kit capable of servicing entire greenhouse, mounted on shelving.
 - 1. Include all hoses, nozzles, and accessories required for complete installation.
 - B. System to be connected to water source listed in Plumbing documents.

- j. ADD Paragraph 2.20 MANUFACTURERS as follows:
 - A. Bidders are hereby informed that the greenhouse was written as performance specs.

1. **GREENHOUSE**

- a. Basis of Design: Subject to compliance with requirements, provide the following product by Hartley Botanic or an APPROVED comparable product by one of the following:
 - i. Miracle Recreation
 - ii. Gothic Arch Greenhouses

5. <u>SECTION 321813 – SYNTHETIC GRASS SURFACING</u>

- a. ADD Paragraphs 2.1-A.5 and 2.1-A.6 as follows:
 - 5. Synlawn, Model: SYNTipede 3436. Synlawn, Model: SYNZoysia X47

6. <u>SECTION 321816.13 – PLAYGROUND PROTECTIVE SURFACING</u>

- a. ADD Paragraph 2.1-B as follows:
 - B. Bidders are hereby informed that the playground protective surfacing was written as performance specs.

1. PLAYGROUND PROTECTIVE SURFACING

- a. Basis of Design: Subject to compliance with requirements, provide the following product by Primo Natural Turf or an APPROVED comparable product by one of the following:
 - i. Landscape Structures
 - ii. Gametime

7. <u>SECTION 323300 – SITE FURNISHINGS</u>

- a. ADD Paragraph 2.4 MANUFACTURERS as follows:
 - A. Bidders are hereby informed that the site furnishings were written as performance specs.

1. **SEATING**

- a. Basis of Design: Subject to compliance with requirements, provide the following product by Anova or an APPROVED comparable product by one of the following:
 - i. Maglin
 - ii. DuMor

2. TABLES

a. Basis of Design: Subject to compliance with requirements, provide the following product by Anova or an APPROVED comparable product by one of the following:

- i. Maglin
- ii. DuMor

3. TRASH RECEPTACLES

- a. Basis of Design: Subject to compliance with requirements, provide the following product by Anova or an APPROVED comparable product by one of the following:
 - i. Maglin
 - ii. DuMor

8. <u>SECTION 329200 - TURF AND GRASSES</u>

a. REMOVE and REPLACE Section 329200 – Turf and Grasses (See attached).

DRAWING CHANGES:

1. Drawing SD-101

a. REVISE 1/SD-101 Demolition Plan per attached Partial Demolition Plan SD1.0

GENERAL COMMENTS:

- 1. The Pre-Bid Meeting was held November 18, 2019 followed by a walk-thru of the project site. The Pre-Bid Meeting sign-in sheet is attached.
- 2. Bidders needing additional site inspection should contact Kevin Dalton at (314) 633-1563 to schedule a time.
- Please contact Kelly Copeland, Contract Specialist, at 573-522-2283 or <u>kelly.copeland@oa.mo.gov</u> for questions regarding bidding procedures and MBE/WBE/SDVE goals and submittal requirements.
- 4. The deadline for technical questions was Friday, November 22, 2019 at noon. All technical questions have been answered by Travis Helmkamp, Oates Associates and are issued in this addendum.
- 5. Changes to, or clarification of, the Bid Documents are only made as issued in the Addenda.
- 6. Current Planholders list is available at: https://www.adsplanroom.net/jobs/232/plan-holders/e1703-01-install-nature-park-missouri-school-for-the-blind
- 7. Prospective bidders contact American Document Solutions, 1400 Forum Blvd Suite 1C, Columbia MO 65201, 573-446-7768 to order official plans and specifications.

ATTACHMENTS:

- 1. REPLACED Section 329200 Turf and Grasses
- 2. Partial Demolition Plan SD1.0
- 3. Pre-Bid Meeting Sign-In Sheet

November 26, 2019

END ADDENDUM NO. 1

SECTION 329200 - TURF AND GRASSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes preparation of soil and seeding of grass seed for areas shown on the plans.
- B. Related Requirements:
 - 1. Section 329113.19 "Planting Soil Mixing"
 - 2. Section 329300 "Plants"

1.3 DEFINITIONS

- A. Amended Soil: 6" of existing topsoil mixed with 2" of organic compost.
- B. Duff Layer: The surface layer of native topsoil that is composed of mostly decayed leaves, twigs, and detritus.
- C. Finish Grade: Elevation of finished surface of planting soil.
- D. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- E. Organic Compost: Decomposed organic waste produced at an IEPA registered composting facility. Compost shall comply with the IEPA Standards for General Use Compost and be registered with the US Composting Seal of Testing Assurance program. It shall have an organic content of 35-65% as determined by the "loss on ignition" test method described in AASHTO T 267. 100% of the compost material shall pass the ½" sieve.
- F. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also include substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- G. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.

- H. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. See Section 329113.19 "Planting Soil Mixing" and drawing designations for planting soils.
- I. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For landscape Installer.
- B. Product Certificates: For fertilizers, from manufacturer.
- C. Pesticides and Herbicides: Product label and manufacturer's application instructions specific to Project.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: Recommended procedures to be established by Owner for maintenance of turf during a calendar year. Submit before expiration of required maintenance periods.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful turf establishment.
 - 1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
- B. Compost Testing: The results of compost analysis shall be provided by the compost supplier. Maturity testing should be performed on-site after the compost is delivered. Before delivery of the compost, the supplier must provide the following documentation:
 - 1. Feedstock percentage in the final compost product.
 - 2. A statement that the compost meets federal and state health and safety regulations
 - 3. A statement that the composting process has met time and temperature requirements.
 - 4. A copy of the lab analysis, less than four months old, performed by a Seal of Testing Assurance Certified Laboratory verifying that the compost meets the physical requirements as described (Test Methods for the Examination of Composting and Compost and the Standard Methods for the Examination of Water and Wastewater):
 - a. pH 5.0-8.5 according to TMECC 4.11A
 - b. Soluble Salt < 10dS/m according to TMECC 4.10-A
 - c. Moisture 30-60% dry weight basis according to SMEWW 2540B

- d. Organic Matter 30-60% dry weight basis according to TMECC 5.07-A
- e. Particle Size 98-100% pass through the ½" sieve according to TMECC 2.02-B
- f. Stability (Carbon Dioxide evolution rate) > 80% relative to positive control according to TMECC 5.08-B
- g. Maturity (See emergence and seedling vigor) > 80% relative to positive control according to TMECC 5.05-A
- h. Physical contaminants (manmade inerts) < 1% dry weight basis according to TMECC 3.08-A
- i. Chemical contaminants Meet or exceed US EPA Class A standard, 40 CFR Section 503.13, Tables 1 and 3 levels:
 - 1. Arsenic < 41 ppm according to TMECC 4.06-AS
 - 2. Cadmium < 39 ppm according to TMECC 4.06-CD
 - 3. Copper < 1,500 ppm according to TMECC 4.06-CU
 - 4. Lead < 300 ppm according to TMECC 4.06-PB
 - 5. Mercury < 17 ppm according to TMECC 4.06-HG
 - 6. Molybdenum < 75 ppm according to TMECC 4.05-MO
 - 7. Nickel < 420 ppm according to TMECC 4.06-NI
 - 8. Selenium < 100 ppm according to TMECC 4.06-SE
 - 9. Zinc < 2,800 ppm according to TMECC 4.06-ZN
- j. Biological contaminants (pathogens) meet or exceed US EPA Class A standard, 40 CFR Section 503.32(a) levels:
 - 1. Fecal coliform < 1,000 MPN per gram, dry weight basis according to TMECC 7.01
 - 2. Salmonella < 3 MPN per 4 grams, dry weight basis according to TMECC 7.02

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws, as applicable.
- B. Sod: Harvest, deliver, store, and handle sod according to requirements in "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" sections in TPI's "Guideline Specifications to Turfgrass Sodding." Deliver sod within 24 hours of harvesting and in time for planting promptly. Protect sod from breakage and drying.

C. Bulk Materials:

- 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
- 2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.

3. Accompany each delivery of bulk materials with appropriate certificates.

1.8 FIELD CONDITIONS

- A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with initial maintenance periods to provide required maintenance from date of Substantial Completion.
 - 1. Spring Planting: April 1 to June 15.
 - 2. Fall Planting: September 15 to November 15.
- B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 SEED

- A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Rules for Testing Seeds" for purity and germination tolerances.
- B. Seed Species:
 - 1. Quality: State-certified seed of grass species as listed below for solar exposure.
 - 2. Quality: Seed of grass species as listed below for solar exposure, with not less than 85 percent germination, not less than 95 percent pure seed, and not more than 0.5 percent weed seed:
 - 3. Grass-Seed Mix: Proportioned by weight as follows:
 - a. 70 percent red fescue (Festuca rubra variety).
 - b. 20 percent Kentucky bluegrass (Poa pratensis).
 - c. 10 percent perennial ryegrass (Lolium perenne).

2.2 TURFGRASS SOD

A. Turfgrass Sod: Approved, complying with "Specifications for Turfgrass Sod Materials" in TPI's "Guideline Specifications to Turfgrass Sodding." Furnish viable sod of uniform density, color, and texture that is strongly rooted and capable of vigorous growth and development when planted.

- B. Turfgrass Species: Sod of grass species as follows:
 - 1. Sun and Partial Shade: Proportioned by weight as follows:
 - a. 70 percent turf type fescue (Festuca arundinacea)
 - b. 30 percent Kentucky bluegrass (Poa pratensis)

2.3 MULCHES

A. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.

2.4 PESTICIDES

- A. General: Pesticide, registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.
- B. Pre-Emergent Herbicide (Selective and Nonselective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to be planted for compliance with requirements and other conditions affecting installation and performance of the Work.
 - 1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
 - 2. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
 - 3. Uniformly moisten excessively dry soil that is not workable, or which is dusty.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Landscape Architect and replace with new planting soil.

3.2 PREPARATION

- A. Protect structures; utilities; sidewalks; pavements; and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
 - 1. Protect grade stakes set by others until directed to remove them.

3.3 SODDING

- A. Lay sod within 24 hours of harvesting. Do not lay sod if dormant or if ground is frozen or muddy.
- B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to soil or sod during installation. Tamp and roll lightly to ensure contact with soil, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.
 - 1. Lay sod across slopes exceeding 1:3.
 - 2. Anchor sod on slopes exceeding 1:6 with wood pegs or steel staples spaced as recommended by sod manufacturer but not less than two anchors per sod strip to prevent slippage.
- C. Saturate sod with fine water spray within two hours of planting. During first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below sod.

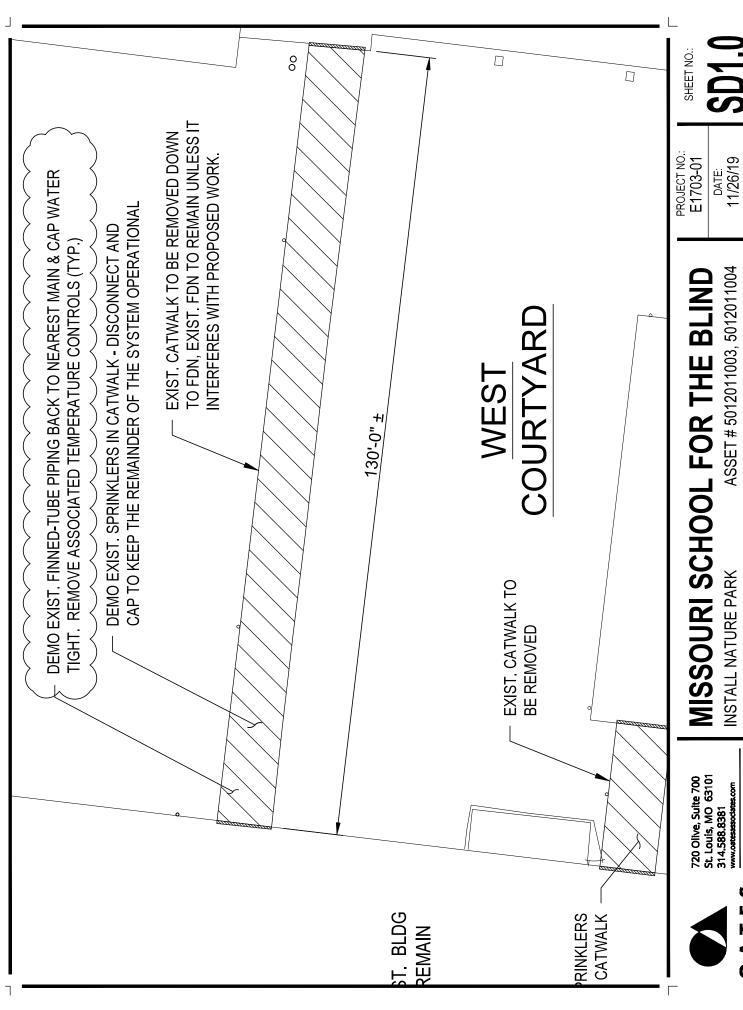
3.4 PESTICIDE APPLICATION

A. Apply pesticides and other chemical products and biological control agents according to requirements of authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.

3.5 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.
- C. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.

END OF SECTION 329200



PARTIAL DEMOLITION PLAN SCALE 1/16" = 1'-0"

REVISION: ADD # 1

<u>SD1.(</u>

| Name & Title | Company Name Type of Contracting | MBE/WBE/ SDVE Status | Phone | E-Mail Address |
|----------------|-------------------------------------|-------------------------|--------------|---|
| SANDRA WALTHER | OA/FNIDC | 9 | 513.99.2283 | 573-991-2283 sandra.Waltherracosmogov |
| Travis Hulmfam | Ontres TEnsinul | 4 | 314-898.638) | 31-1-898.838) Hravis. Aulmkample 00 123 1300 1017 1300 |
| MATT GOOK | BRic | | 314.715.5889 | 314.725.5889 Mcrooked briggasthership.com |
| CHRIS FEN | BR; C | | 3 | cfey e bricpart nestrip, can |
| Geoff | MSB | | 314-72 -4320 | geoffing boundy p instiden in g |
| Mike Howard | OALFMDC | | 5058-445-959 | Mike, howard @ anmongov |
| Kern Jalton | OA (FMDC | | 314-6337563 | Keutn.da Itan e oa. mo.gov |

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| heticon Construction, Inc. Gr. C. | | 314 961-7444 | Kschork@lexiconConstructur.com |
| DIM ECOLOGICAL SERVICES INC | | 314-580-6049 | CAUTRY ODIM ECOLOGICAL LON |
| LAYNELO CONSTRUCTION SERNCES | N/A (| (636)294-6245 | BIDS @ LCS CONSTRUCT. COM |
| O, A. F.M. D, C, | 101 | 5/168-44C-112 | 314-244-8945 Charles, Don'd QOA, MOGGOV |

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| JAMES GABEL | DAMES GABEL SWATTH GAROUP | SNE | 3145656268 | 3145656268 JUARBELO SUATAGROUP. COM |
| Alec Macko Estimator | Alec Macko DJM Ecological Services Estimator | | 314-795-9419 | amacko a dimecologial, con |
| HALEY COONS Structurer PM | DATES ASSOC. | | 314-508-6381 | 314-508-638/haley.coons@oatesassociat |
| Eric Echart | Ctc Group Safety and Security | | 314-650-7207 | 314-650-7207 eeckent@c-cgroup.com |

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| Company Name Type of Contracting | ICS CONSTRUCTION | Interface Construct | Dowler Corst | Hot Construction Inc. GC | Will Electropics | |
| Name & Title | TONY MARLO | Doig Schneider | Russ | Michael Hof | Scorr Middleran | ¥ |